

37 CFR 1.135. The fee under 37 CFR 1.17 should be charged to our Deposit Account No. 50-2215.

REMARKS

Claims 1-17 and 22-24 were rejected under 35 USC § 102 (in two separate rejections) over Schmidt. These rejections are respectfully traversed.

In the broadest use of the term, "intaglio printing" is a method in which the image to be printed is etched into the surface of a printing plate, and to that extent, rotogravure is one form (subcategory) of intaglio printing. Another form (subcategory) of intaglio printing is security document printing, also known as "engraved steel die" or "copper plate" printing. See Vega [0003]. These two subcategories are known in the art to be different and rely on different types of inks. Vega confirms that fact by stating that "security documents... 'intaglio printing' [does]... not apply to the also well known rotogravure or gravure printing processes, which rely on a different type of ink." [0003].

Schmidt does not relate to security document printing. There is nothing in that reference which either teaches or suggests that the ink and/or printing process disclosed in that text is a security document ink or security document printing. To the contrary, Schmidt explicitly states that it relates to a rotogravure printing ink and rotogravure printing.

In contrast to Schmidt, this application relates to a security document ink and its use in document printing. In the Response to Arguments of the current Office Action, it is asserted that the reference to a security document ink is merely an statement of intended

use rather than a limitation. Applicants respectfully disagree because, as Vega confirms, the art knows that a security document printing ink has a special set of properties, and as soon as the ink is designated as a security document printing ink, the ink has those properties.

It was pointed out before that the record establishes intaglio security document printing inks must meet the following requirements: (1) proper rheology for “engraved steel dye” printing, (2) they must remain on the engraved cylinder until the moment of printing and then must transfer readily and in a consistent manner to the substrate to be printed, (3) ease of removal of surplus ink (4) they must have good film-forming properties and the cured inks must be sufficiently flexible that they remain intact even when the printed matter (e.g. banknotes) is subject to abuse, (5) once the substrate has been printed, the ink must not transfer back to other surfaces with which it may come into contact, especially other printed matter, (6) the cured ink must have excellent chemical and mechanical resistance so as to withstand the many diverse materials and conditions to which banknotes may be subject, (7) it must be safe for handling by all members of the public, including the very young, (8) it must be easily cleaned from the surface of a wiping cylinder, (9) it must have non-offsetting properties, (10) it must have the outstanding chemical and mechanical resistance required by international and US printing authorities, and (11) it must have acceptable toxicologic and environmental properties.

The point here is that the person skilled in this art, to whom the specification and claims are directed, knows that a recitation in the claims that the ink is a security document printing ink (1) is a limitation, not just an indication of future use, and (2) means the ink is not a rotogravure ink. Burdening the claim with further details, i.e., “providing the office with or how the inks differ”, when the artisan already knows how they do, is

unnecessary to distinguish the security document ink from rotogravure inks. As Vega establishes, rotogravure and security document inks are art recognized to be different.

Schmidt's rotogravure ink contains a vinyl ether as an essential component [0033], and additionally contains an actinic radiation-curable binder agent system, radical photoinitiator, and optionally, coloring agents and additives [0022]. Each of these components can be selected from a variety of materials. For example, Schmidt suggests the photoinitiator can be a thioxanthone which the present application shows both fluoresces and has a very poor cure when used in a security document intaglio ink formulation.

The previous Office Action (adopted in the Action) admitted that Schmidt does not have any teaching about non- fluorescing. Nevertheless, the Action asserts without any attempt to provide a factual basis, that the individual components and the formulated ink do not fluoresce, and specifically refers to Ex. 4 as being an ink which does not visibly fluoresce under UV light. Since Schmidt never mentions fluorescence at all, even in passing, there is no basis for this contention. In any event, applicants pointed out in the last response that there was a lack of any factual basis from which this conclusion could be drawn, and the current Office Action does not attempt to cure that deficiency. That means the assertion is nothing more than a speculative guess, which is well established to be impermissible to justify a finding of unpatentability on any grounds.

Perhaps the Office Action meant to assert that the Schmidt ink would inherently be a security document printing ink which does not fluoresce. That is also not permissible here. "In relying upon the theory of inherency, the examiner must provide a basis in fact and/or technical reasoning to reasonably support the determination that the allegedly

inherent characteristic necessarily flows from the teachings of the applied prior art." *Ex parte Levy*, 17 USPQ2d 1461, 1464 (BPAI 1990) (emphasis in original and added).

"Inherency, however, may not be established by probabilities or possibilities. The mere fact that a certain thing may result from a given set of circumstances is not sufficient." *In re Robertson*, 49 USPQ2d 1949, 1950-51 (Fed. Cir. 1999). There is no factual basis and the attempt at technical reasoning is simply more speculation, as shown below. The burden of proof for asserting inherency has not been met.

The Tucker Declaration establishes that Darocur 1173, which is one-half of the Darocur 4265 photoinitiator in Schmidt's Example 4, fluoresces. The Office Action states this is not convincing because "the Declaration is silent with regard to the mixture fluorescing under the same described conditions." But the Declaration states that "Darocur 1173 and photoinitiators containing a substantial amount of it, such as Darocur 4265, as well as inks containing them do not meet the requirement of not fluorescing under UV light at least in the visible light wavelength range." Thus, the Declaration is not silent but rather states that the mixture fluoresces!

The Office Action then goes on to say that, once again without factual support, that photobleaching of acylphosphine will "overcome" the fluorescing properties of the other initiator. But this contention is also mere speculation, and not based on anything in the art. The Miller article does teach that in photobleaching, the irradiation products of the particular photoinitiator absorb less than the parent compound, but nothing in this article or elsewhere suggests that photobleaching or the irradiation products have any effect whatsoever on any other photoinitiator present. It also only refers to possible acylphosphine oxide photobleaching as being only over a 10 nm portion of the 300 nm visible range.

The anticipation rejections are therefore based on a speculative theory of inherency which in turn is based on even more speculation, in the face of a sworn statement that the photoinitiator used in Schmidt's Example 4 fluoresces. Deeming Example 4 to be anticipatory, as done on page 3 of the current Office Action, in the face of the fact that security document and rotogravure inks are different and the evidence that the Example 4 composition fluoresces, is untenable and improper. The Patent Office "may not, because *it may doubt* that an invention is patentable, resort to speculation, unfounded assumption or hindsight reconstruction to supply deficiencies in its factual basis." *In re Warner*, 154 USPQ 173, 178 (CCPA 1967)(emphasis by the Court).

Schmidt teaches that each of the various components in the rotogravure ink can be selected from a variety of materials. That also makes an anticipation rejection untenable because anticipation is not present when it is necessary, as it is here, to pick, choose and combine various portions of a reference when reading a claim on that reference. *In re Arkley*, 172 USPQ 524, 526 (CCPA 1972); Accord *Ex parte Beuther*, 71 USPQ2d 1313 (BPAI 2003)(unpublished). Here, a judicious selection is necessary, making anticipation untenable and obviousness the relevant consideration. While this consideration was dismissed in the Office Action on the grounds that Example 4 anticipates claim 1 and anticipation is the epitome of obviousness, it has been shown above that Example 4 does not anticipate claim 1. Moreover, the Office Action suggestion that eliminating an element and its function is within the skill in the art, in and of itself, is an admission that there is no anticipation because a change is necessary.

The § 102 rejection is untenable, and should be withdrawn.

Since no reason to make the appropriate selections exists, making a judicious selection is not only novel, but it is not obvious. Nothing in Schmidt suggests that acylphosphine oxides may be used as an initiator in security document printing inks without causing the resulting inks to fluoresce in the visible region under UV light. As to the eliminating an element and its function being within the skill in the art contention, a necessary predicate is that there must be a reason to desire to eliminate that function in Schmidt's rotogravure ink, and no such reason is present here. Besides being a different type of ink, Schmidt does not mention fluorescence, even in passing, and it is respectfully submitted that such a mention is necessary before the skilled person would even consider eliminating something to avoid fluorescence.

Claims 18-19 were rejected under 35 USC § 103 over Schmidt in view of Veya and claim 20 over Schmidt in view of Veya and Ghioghiu. Both rejections are respectfully traversed.

The foregoing discussion about Schmidt is applicable here. Veya has been cited in this rejection only for the substrate being paper or the document produced being a security document while Ghioghiu has been cited only for the document being a banknote. They are thus not asserted to cure the basic deficiencies in Schmidt, and in fact, they do not do so. Nothing in Schmidt suggests that acylphosphine oxides may be used as an initiator in security document printing inks without causing the resulting inks to fluoresce in the visible region under UV light. Both Veya and Ghioghiu fail to teach or suggest the use of a phosphine oxide as a photoinitiator in a security document printing ink. Accordingly, these rejections are also untenable.

In view of the all of the foregoing, it is believed the pending application is in condition for allowance.

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